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# NASA Procedural Requirements

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## **Subject: NASA Enterprise Architecture Procedures**

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## **APPENDIX C: Investment Portfolio Requirements**

### **C.1 Introduction**

CPIC is the methodology to create a prioritized list of intended, cyclical investments. The resultant artifact for the CIO is the actual IT Investment Portfolio. This document outlines the general instruction for the creation of a CIO IT Investment Portfolio. This instruction was prepared specifically for use by the Office of the NASA CIO but can be easily adapted for use by any CIO, executive, or senior manager.

### **C.2 Goals and Benefits**

a. IT Investment Portfolio Requirement Goals:

- (1) Balanced OCIO IT portfolio aligned with NASA's strategic needs.
- (2) Clear priorities.
- (3) Improved program and project metrics collection.

b. The Investment Portfolio process results in the following benefits:

- (1) A clear list of prioritized investments that align with the Agency's goals.
- (2) Key priority discussions and decisions are made in a clear and consistent manner.
- (3) Improved metrics.

## C.3 Portfolios

a. The IT Investment Portfolio is a tool to manage and monitor a list of IT investments. The list of investments in the IT Investment Portfolio is periodically analyzed against the evolving Enterprise Architecture and strategic goals of NASA. The IT Investment Portfolio clearly shows all IT investments grouped by three portfolios: (1) Office Automation, IT Infrastructure and Telecommunications, (2) Multi-Program/Project IT, and (3) Program Unique IT and their nine subsequent portfolio elements: Voice, WAN, LAN, Video, Desktop Hardware/Software, Data Centers, Application Services, Messaging and Collaboration, and Public Web. The ongoing identification and evaluation of IT investments will ensure that the IT Investment Portfolios and NASA strategic goals are aligned.

b. The resultant document from the IT Investment Portfolio process is a stack-ranked, prioritized list of the IT investments for any given organization. The document clearly shows all IT investments in order of priority and clearly indicates the line where the current budget ends. The resultant view of budget line placement clearly indicates those IT investments above the line, which are funded, and those IT investments below the line, which are necessary but unfunded.

## C.4 Instructions

a. Use the instruction contained below to create an IT Investment Portfolio for your organization. The IT Investment Portfolio should contain all of the relevant projects, programs, activities, and tasks. Organize all relevant actions into a prioritized list. Once the list of prioritized actions is completed with the appropriate information, then a line should be drawn where budget cycle funding runs out. All actions above the line are fully funded for the next budget cycle, and all actions below the line are unfunded unless there is a change in budget. A clear, well documented priority list simplifies decisions if the budget and associated funding changes.

b. Definition of ?IT Investment?

(1) NASA uses the OMB definition of an ?IT Investment? which is defined as, ?All funding spent on IT systems, including funding for development, modernization and enhancement, and funding for steady state operations.?

(2) The investment definition must be applied consistently. Every funding decision represents a decision to invest limited resources and includes all allocated dollars, committed workforce, and any assigned assets.

## C.5 What shall be included in the IT Investment Portfolio?

a. It is critical that all investments are included. The decisions affect the complete OCIO program and project portfolio. Investments to be included in the IT Investment Portfolio include:

- (1) All programs and projects funded by the Office of the CIO.
- (2) All investments that are in the current OCIO FY budget.
- (3) All years in current budget plan to get complete picture.

## C.6 Who shall participate in the Process?

Although many people will be ultimately involved in creating the validated, prioritized IT Investment Portfolio, the primary participants are the OCIO program executives, the OCIO Business Office, and the NASA CIO. Program executives perform the first pass by reviewing and rating all programs and projects for which they are responsible. The OCIO Business Office provides support for all budget information and all program or project metrics. The NASA CIO oversees integration of the program executive's inputs, reviews merged priority lists, and validates the final result. The program executives are the program or project advocates in the OCIO CPIC process.

## C.7 How to Apply Ratings

a. In order for the IT Investment Portfolio to start with valid parallelism, each program executive must use the same criteria for their respective scoring distributions. The following explains the rating methodology:

(1) First, all listed programs and projects are mapped for alignment with the Information Resources Management (IRM) Strategic Plan and the NASA Strategic Plan.

(2) Then, all programs and projects are assigned a ?1, ?2, or ?3? using the following distribution. See table below:

Assignment	Priority Level	Description
1	High	No more than 15% of all investments may have a ?1.?
2	Medium	A minimum of 70% of investments are assigned a ?2.?
3	Low	No more than 15% of all investments may have a ?3.?

(i) The diagram below further illustrates this distribution.

Figure C1

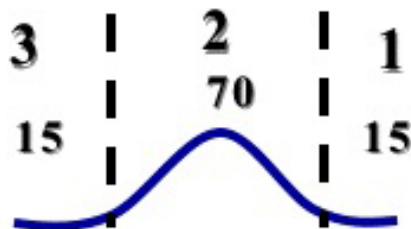


Figure C2

b. A forced distribution is necessary in order to kick off the overall process and bring

hard decisions to the forefront early. The forced distribution means program executives must prioritize their work, since not everything can be a high priority. A forced distribution also creates balance across program executives and the programs and projects that they represent. The rating process causes many of the difficult discussions to be made early in the budget process.

## C.8 Using the Results

- a. The OCIO program executives, OCIO Business Office, and the NASA CIO use the results of the CPIC process to make all decisions related to changes in the OCIO budget.
- b. Each program executive's list is merged into an overall OCIO list.
- c. The overall list is reviewed by the NASA CIO.
  - (1) Each program executive advocates for each program or project they manage.
  - (2) Each classification is checked for consistency.
  - (3) Boundary conditions are checked for consistency.
  - (4) The final list is validated by the NASA CIO.
- d. The prioritized CPIC list is reviewed on a regular basis to make sure it is still aligned with NASA's evolving strategic needs.
- e. The prioritized CPIC list is used to make all budget-related decisions.
  - (1) In all budget exercises, the funding line is adjusted and the lowest rated programs and projects are dropped.
  - (2) All cuts are clear and the impacts are easy to identify. It is not appropriate to spread the reductions.
- f. The CPIC results are used both internally and externally to make all budget-related decisions based on a clear and validated list of priorities.

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